effects of the intervention are observed.

- 4. A process for fermentation monitoring according to claim 1 wherein the fermentation substrates and products are different than those outlined in the specification, but the monitoring and/or control methodology are the same.
- 5. A process for fermentation monitoring according to claim 1 wherein empirical data is acquired to determine the chemical formula for the species in the reaction.

ABSTRACT OF THE DISCLOSURE

It is desirable to enhance reproducibility and control of batch fermentation processes. Some examples of these processes include: alcoholic beverage manufacture, and acetone and pharmaceutical production. A mass balance methodology is utilized to monitor the course of the reaction. The accurate description of the fermentation that is produced can facilitate reproducibility. Also, careful tracking of the course of the reaction can enable precisely timed interventions that will have an effect on the final outcome.